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ppl. No. To be assigned; Group Art Unit: To be assigned kt. No. 1488.1220003/EKS/E/H; ventors: Li et al.; Tel: 202/371-2600 itle: Human G-Protein Coupled Receptors

1	GCACGAGGAACAGAACACTTTCTCATGTCCAGGGTCAGATTACAAGAGCACTCAAGACTT	60
61	${\sf TACTGACGAAAACTCAGGAAATCCTCTATCACAAAGAGGTTTGGCAACTAAACTAAGACA}$	120
121	${\sf TTAAAAGGAAAATACCAGATGCCACTCTGCAGGCTGCAATAACTACTACTTACT$	180
181 1	ATTCAAACCCTCCAGAATCAACAGTTATCAGGTAACCAACAAGAAATGCAAGCCGTCGAC M Q $\dot{\text{A}}$ V D	240 5
241 6	AATCTCACCTCTGCGCCTGGGAACACCCAGTCTGTGCACCAGAGACTACAAAATCACCCAG N L T S A P G N T S L C T R D Y K I T Q	300 25
301 26	GTCCTCTTCCCACTGCTCTACACTGTCCTGTTTTTTGTTGGACTTATCACAAATGGCCTG V L F P L L Y T V L F F V G L I T N G L	360 45
361 46	GCGATGAGGATTTTCTTTCAAATCCGGAGTAAATCAAACTTTATTATTTTTCTTAAGAAC A M R I F F Q I R S K S N F I I F L K N	420 65
421 66	ACAGTCATTTCTGATCTTCTCATGATTCTGACTTTTCCATTCAAAATTCTTAGTGATGCC T V I S D L L M I L T F P F K I L S D A	480 85
481 86	AAACTGGGAACAGGACCACTGAGAACTTTTGTGTGTCAAGTTACCTCCGTCATATTTTAT K L G T G P L R T F V C Q V T S V I F Y	540 105
541 106	TTCACAATGTATATCAGTATTTCATTCCTGGGACTGATAACTATCGATCG	600 125
601 126	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	660 145
661 146	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	720 165
721 166	CAGCCGAGAGACAAGAATGTGaAGAAaTGCTCTTTCCTTAAATCAGAGTTCGGTCTAGTC Q P R D K N V K K C S F L K S E F G L V	780 185
781 186	TGGCATGAAATAGTAAATTACATCTGTCAAGTCATTTTCTGGATTAATTTCTTAATTGTTW H E I V N Y I C Q V I F W I N F L I V	840 205

FIG.1A

Appl. No. To be assigned; Group Art Unit: To be assigned Dkt. No. 1488.1220003/EKS/EJH; Inventors: Li et al.; Tel: 202/371-2600
Title: Human G-Protein Coupled Receptors

841	ATTGTATGTTATACACTCATTACAAAAGAACTGTACCGGTCATACGTAAGAACGAGGGGT	900
206	IVCYTLITKELYRSYVRTRG	225
901	GTAGGTAAAGTCCCCAGGAAAAAGGTGAACGTCAAAGTTTTCATTATCATTGCTGTATTC	960
226	V G K V P R K K V N V K V F I I I A V F	245
961	TTTATTTGTTTTGTTCCTTTCCATTTTGCCCGAATTCCTTACACCCTGAGCCAAACCCGG	1020
246	FICFVPFHFARIPYTLSQTR	265
1021	GATGTCTTTGACTGCACtGcTGAAAATACTCTGTTCTATGTGAAAGAGAGCACTCTGTGG	1080
266	D V F D C T A E N T L F Y V K E S T L W	285
1081	TTAACTTCCTTAAATCCATCCCTTCATCTATCTATTTTTT	1110
286	TTAACTTCCTTAAATGCATGCCTGGATCCGTTCATCTATTTTTTCCTTTGCAAGTCCTTC L T S L N A C L D P F I Y F F L C K S F	1140 305
1141 306	AGAAATTCCTTGATAAGTATGCTGAAGTGCCCCAATTCTGCAACATCTCTGTCCCAGGAC R N S L I S M L K C P N S A T S L S O D	1200 325
		323
1201 326	AATAGGAAAAAAGAACAGGATGGTGGTGAcCCAAATGAAGAGAGACTCCAATGTAAACAAAT N R K K E Q D G G D P N E E T P M *	1260
320	N A A E Q D G G D P N E E P M *	343
1261	TAACTAAGGAAATATTTCAATCTCTTTGTGTTCAGAACTCGTTAAAGCAAAGCGCTAAGT	1320
1321	AAAAATATTAACTGACGAAGAAGCAACTAAGTTAATAATAATGACTCTAAAGAAACAGAA	1380
1381	GATTACAAAAGCAATTTTCATTTACCTTTCCAGTATGAAAAGCTATCTTAAAATATAGAA	1440
1441	AACTAATCTAAACTGTAGCTGTATTAGCAGCAAAACAAAC	1500
1501	CATCCAAAACTACACACACAATTCATCTTTC	
1001	CATGCAAAACTACACAGAATTCATGTTTTGgCAGAGTTTTTGGCAAAATGAGTAATCATAT	1560
1561	AATATTTACTGTAATTTTTAAAATACATTATCGTTCACAATTTTATTTTTTCATAATCAA	1620
1621	CTAAGGAAGAACGATCAATTGGATATAATCTTCTTACCAAAAATGATAGTTAAAATGTAT	1680
		1000
1681	ATATATCCTAGTCCCCTAACCaAATCCTGACCTATTGGGATACTTATAAAAATTTAAGTA	1740
1741	AGTGGGATACACAAAGAATAATAACTATTAACTTTTCATTATTAGCcAAAAAACCTAAGGG	1800

FIG.1B

Appl. No. To be assigned; Group Art Unit: To be assigned Dkt. No. 1488.1220003/EKS/EJH; Inventors: Li et al.; Tel: 202/371-2600 Title: Human G-Protein Coupled Receptors

1801	ATTTAAACTAATTGAAaCTGTATTTGATTGGACTTAATTTTTTATGTTTATTTAGAAGAT	1860
1861	A A A GATTTA A GAAGACCTTTA CAATAAA GAAGAAA TATCGAAGTCATTA AAATAAGGA	1920
1921	${\tt GACTTACTTTTATGACATTCTAATACTAAAAAATATAGAAATATTTCCTTAATTCTAGAG}$	1980
1981	${\tt AAACTAGTTTTACTAATTTTTTACAACTTCAATAATACCATCACTGACACTTACCTTTAT}$	2040
2041	${\sf TAATTAGCTTCTAGAAAATAGCTGCTAATTAGGTTAATGAACATTTTACCTTAGTGAAAA}$	2100
2101	${\tt AAAaTTAATTAAATATGATTACAAAGTTGCACAGCATAACTACTGAGAGGAAAGTGATTG}$	2160
2161	${\tt ATCTGTTTGTAATTACTTGTTTGTATTGGTGTGTATAAAATACAAATTTACATTAAACTC}$	2220
2221	TAAAtcattaaaAAAAAAAAAAAAAA 2247	

FIG.1C

Sheet 4 of 7

ppl. No. To be assigned; Group Art Unit: To be assigned kt. No. 1488.1220003/EKS/EIH; ventors: Li et al.; Tel; 202/371-2600 itle: Human G-Protein Coupled Receptors

1	MQAVDNLTSAPGNTSLCTRDYKITQVLFPLLYTVLFFVGLITNGLA	46
3	: : :::: ::	52
47	MRIFFQIRSKSN.FIIFLKNTVISDLLMILTFPFKILSDAKLGTGPLRTF	95
53	: ::. . .:: . : :: : : . LVVIVQNRKKINSTTLYSTNLVISDILFTTALPTRIAYYAMGFDWRIGDA	102
96	VCQVTSVIFYFTMYISISFLGLITIDRYQKTTRPFKTSNPKNLLGAKILS : .: .:: :: :: ::	145
103	LCRITALVFYINTYAGVNFMTCLSIDRFIAVVHPLRYNKIKRIEHAKGVC	152
146	VVIWAFMFLLSLPNMILTNRQPRDKNVKKCSFLKSEFGLVWHEIVNYI	193
153	::: :: . : :::: . ::.:: IFVWILVFAQTLPLLINPMSKQEAERITCMEYPNFEETKSLPWILLGACF	202
194	CQVIFWINFLIVIVCYTLITKELYRSYVRTRGVGKVPRKKVNVKVFII	241
203	:: :: ::: : : : : : IGYVLPLIIILICYSQICCKLFRTAKQNPLTEKSGVNKKALNTIILII	250
242	IAVFFICFVPFHFARIPYTLSQTRDVFDCTAENTLFYVKESTLWLTSL	289
251	: .: . : . :.:: :	299
290	NACLDPFIYFFLCKSFRNSLISMLKCPNSATSLSQDNRKKEQDGGDPNEE	339
300	- : ::::. - - : - :::: NCCMDPFIYFFACKGYKRKVMRMLKRQVS.VSISSAVKSAPEENSREMTE	348
340	TPM 342	
349	. TQM 351	

FIG.2

Appl. No. To be assigned; Group Art Unit: To be assigned Dkt. No. 1488.1220003/EKS/EJH; Inventors: Li et al.; Tel: 202/371-2600 Title: Human G-Protein Coupled Receptors

1 1	GGCACGAGCCCACCCTGCGTCGGGCCTCAGTCAGCCCCCGGGGGAGGCCATGAACGCCAC M N A T	60 4
61 5	GGGGACCCCGGTGGCCCCGAGTCCTGCCAACAGCTGGCGGCCGGC	120 24
121 25	CATTGTTCTGCACTACAACCACTCGGGCCGGGCCCGGGGCGCGGGGGCCCGGAGGATGG I V L H Y N H S G R L A G R G G P E D G	180 44
181 45	CGGCCTGGGGGGCCCTGCGGGGGGCTGTCGGTGGCCGCCAGCTGCCTGGTGGTGCTGGAGAA G L G A L R G L S V A A S C L V V L E N	240 64
241 65	CTTGCTGGTGCTGGCGGCCATCACCAGCCACATGCGGTCGCAACGCTGGGTCTACTATTG L L V L A A I T S H M R S Q R W V Y Y C	300 84
301 85	CCTGGTGAACATTACGATGAGTGACCTGCTCACGGGCGCGGCCTACCTGGCCAACGTGCT L V N I T M S D L L T G A A Y L A N V L	360 104
361 105	GCTGTCGGGGGCCCGCACCTTCCGTCTGGCGCCCGCCCAGTGGTTCCTACGGAAGGGCCT L S G A R T F R L A P A Q W F L R K G L	420 124
421 125	GCTCTTCACCGCCCTGGCCGCCTCCACCTTCAGCCTGCTCTTCACTGCAGGGTTGCGCTT L F T A L A A S T F S L L F T A G L R F	480 144
481 145	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	540 164
541 165	CTTCATCGGCCTCTGGTGGCTGCTGGCCGCTGCTGGGGATGCTGCCTTTGCTGGGCTG F I G L C W L L A A L L G M L P L L G W	600 184
601 185	GAACTGCCTGTGCGCCTTTTGACCGCTGCTCCAGCCTTCTGCCCCTCTACTCCAAGCGCTA N C L C A F D R C S S L L P L Y S K R Y	66 0 204
661 205	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	720 224
721 225	GGCCATCTTCCGCCTGGTGCAGGCCAGCGGGCAGAAGGCCCCACGCCCAGCGGCCCGCCG	780 244

Appl. No. To be assigned; Group Art Unit: To be assigned Dkt. No. 1488,1220003/EKS/EJH;\
Inventors: Li et al.; Tel: 202/371-2600
Title: Human G-Protein Coupled Receptors

781	CAAGGCCCGCCGCCTGCTGAAGACGGTGCTGATGATCCTGCTGGCCTTCTTGGTGTGCTG	840
245	KARRLLKTVLMILLAFLVCW	264
841	00040040747077000700700700700700707070070	
265	GGGACCACTCTTCGGGCTGCTGCTGGCCGACGTCTTTTGGCTCCAACCTCTGGGCCCAGGA G P L F G L L A D V F G S N L W A O E	900
200	G F L F G L L A D V F G S N L W A Q E	284
901	GTACCTGCGGGGCATGGACTGGATCCTGGCCCTGGCCGTCCTCAACTCGGCGGTCAACCC	960
285	Y L R G M D W I L A L A V L N S A V N P	304
961	CATCATCTACTCCTTCCGCAGCAGGGAGGTGTGCAGAGCCGTGCTCAGCTTCCTCTGCTG	1020
305	IIYSFRSREVCRAVLSFLCC	324
1021	CGGGTGTCTCCGGCTGGGCATGCGAGGGCCCGGGGACTGCCTGGCCCGGGCCGTCGAGGC	1080
325	G C L R L G M R G P G D C L A R A V E A	344
1081	TCACTCCGGAGCTTCCACCACCGACAGCTCTCTGAGGCCAAGGGACAGCTTTCGCGGCTC	1140
345	H S G A S T T D S S L R P R D S F R G S	364
1141	CCGCTCGCTCAGCTTTCGGATGCGGGAGCCCCTGTCCAGCATCTCCAGCGTGCGGAGCAT	1200
365	R S L S F R M R E P L S S I S S V R S I	384
1201	CTGAAGTTGCAGTCTTGCGTGTGGATGGTGCAACCACCGGGTGCGTGC	1260
385	*	385
1261	CCTGGGGTACAGGAAGCTGTGTGCACGCAACCTCGCCCTGTATGGGGAGCAGGGAACGGG	1320
	55. dada marada da rara da rada da rata da rada da rad	1320
1321	ACAGGCCCCATGGACTTGCCCGGTGGCCTCTCGGGGCTTCTGACGCCATATGGACTTGC	1380
1001	001	
1381	CCATTGCCTATGGCTCACCCTGGACAAGGAGGCAACCACCCCACCTCCCCGTAGGAGCAG	1440
1441	AGAGCACCCTGGTGTGGGGGCGAGTGGGTTCCCCACAACCCCGCTTCTGTGTGATTCTGG	1500
	, in the second of the second	1300
1501	GGAAGTCCCGGCCCCTCTCTGGGCCTCAGTAGGGCTCCCAGGCTGCAAGGGGTGGACTGT	1560
1501	000170017000700010170117011701170117011	
1561	GGGATGCATGCCCTGGCAACATTGAAGTTCGATCATGGTAAAAAAAA	1620
1621	AAAAAAAAAAAAAA 1637	
	TOO!	

FIG.3B

ppl. No. To be assigned; Group Art Unit: To be assigned kt. No. 1488.1220003/EKS/EJH; ventors: Li et al.; Tel: 202/371-2600 itle: Human G-Protein Coupled Receptors

1	MNATGTPVAPESCQQLAAGGHSRLIVLHYNHSGRLAGRGGPEDGGLGALR	50
1	.: :. :::::::::::::::::::::::::::::	49
51	GLSVAASCLVVLENLLVLAAITSHMRSQRWVYYCLVNITMSDLLTGAAYL	100
50	.::: :: :: . :: : :. ::: . VVFILICCFIILENIFVLLTIWKTKKFHRPMYYFIGNLALSDLLAGVAYT	99
101	ANVLLSGARTFRLAPAQWFLRKGLLFTALAASTFSLLFTAGLRFATMVRP	150
100	ANLLLSGATTYKLTPAQWFLREGSMFVALSASVFSLLAIAIERYITMLKM	149
151	VAESGATKTSRVYGFIGLCWLLAALLGMLPLLGWNCLCAFDRCSSLLPLY!:::::::::::::::::::::::::::::::::	200
150	KLHNGS.NNFRLFLLISACWVISLILGGLPIMGWNCISALSSCSTVLPLY	198
201	SKRYILFCLVIFAGVLATIMGLYGAIFRLVQASGQKAPRPAARRKARR	248
199	HKHYILFCTTVFTLLLLSIVILYCRIYSLVRTRSRRLTFRKNISKASRSS	248
249	LLKTVLMILLAFLVCWGPLFGLLLADVFGSNLWAQEYLRGMDWILA	294
249	::: . :. : :: :. ::: . ENVALLKTVIIVLSVFIACWAPLFILLLLDV.GCKVKTCDILFRAEYFLV	297
295	LAVLNSAVNPIIYSFRSREVCRAVLSFLCCGCLRLGMRGPGDCLARAVEA	344
298	: ::: :::: :::: LAVLNSGTNPIIYTLTNKEMRRAFIRIMSCCKCPSGDSAGKFKRPIIA	345
345	HSGASTTDSSLRPRDSFRGSRSLSFRMREPLSSIS 379	
346	: : . :. ::. GMEFSRSKSDNSSHPQKDEGDNPETIMSSGNVNSSS 381	

FIG.4